

LEPIDOPTERA FROM THE SUDAN.

BY WILLIAM WARREN, M.A., F.E.S., AND THE HON. N. CHARLES
ROTHSCHILD, M.A., F.L.S.

(Plate IV.)

THE specimens mentioned in the present article were collected in the Sudan by the junior author, the Hon. Francis R. Henley, and Mr. A. F. N. Wollaston in 1904.*

1. **Papilio demodocus** Esp., *Aust. Schm.* p. 205. n. 93. t. 51. fig. 1 (1798) ("China," "Bengalen," *loci error*).
2 ♀♀, Khartoum, February 18th, 1904.
This species was abundant at Khartoum in the Zoological Gardens, flying round lemon trees (*Citrus*).
2. †**Danaiida chrysippus f. chrysippus** (Linn.), *Syst. Nat.* ed. x. p. 471 (1758) (Egypt).
3 ♂♂, 1 ♀, Nakheila, R. Atbara, February 1904.
3. †**Danaiida chrysippus f. dorippus** (Klug), *Symb. Phys.* text t. 48. f. 1-5 (1845) (Dongola).
2 ♂♂, 1 ♀, Nakheila, R. Atbara, January 31st, February 1st and 6th, 1904.
4. **Pyrameis cardui** (Linn.), *Syst. Nat.* ed. x. p. 475. n. 107 (1758) (Europe).
1 ♂, Nakheila, R. Atbara, February 13th, 1904.
5. **Belenois mesentina** (Cram.), *Pap. Exot.* iii. p. 140. t. 270. f. A. B. (1782) (Coromandel).
4 ♂♂, 4 ♀♀, Nakheila, R. Atbara, January 30th—February 6th, 1904.
6. †**Teracolus दौरا** (Klug), *Symb. Phys.* text t. 8. f. 1-4 (1829) (Arabia Felix); Sharpe, *Monograph Teracolus* p. 125 (1901).
9 ♂♂, 9 ♀♀, Nakheila, R. Atbara, January 30th—February 12th, 1904.
No specimens of the "dry season form" † *liagore* (Klug) were observed. One ♀ example seenred shows traces of the orange patch on the forewing.
7. **Teracolus protomedia** (Klug), *Symb. Phys.* text t. 8. f. 13. 14 (1829) (Arabia Felix).
7 ♂♂, 1 ♀, Nakheila, R. Atbara, January 31st—February 12th, 1904.

* Species marked thus, †, were treated of in our previous paper on "Egyptian and Soudanese Lepidoptera," *Nor. Zool.* vol. viii. pp. 426-434 (1901).

8. *Teracolus evarne* (Klug), *Symb. Phys.* text t. 6. f. 1-4 (1829) (Ambukol);
Sharpe, *Monograph Teracolus* p. 90 (1900).
22 ♂♂, 6 ♀♀, Nakheila, R. Atbara, January 31st—February 14th, 1904.
9. *Teracolus pseudacaste* Butl., *P. Z. S.* p. 156. t. 6. f. 11 (1876) (White Nile).
7 ♂♂, 2 ♀♀, Nakheila, R. Atbara, January 31st—February 12th, 1904.
10. †*Cupido baeticus* (Linn.), *Syst. Nat.* ed. xii. p. 789. n. 226 (1767) (Barbary).
7 ♂♂, 8 ♀♀, Nakheila, R. Atbara, January 30th—February 9th, 1904.
11. †*Cupido ubaldus* (Cram.), *Pap. Ex.* iv. p. 269. t. 390. f. L. M. (1782)
(Coromandel).
2 ♂♂, 2 ♀♀, Nakheila, R. Atbara, February 3rd—11th, 1904.
12. †*Cupido theophrastus* (Fabr.), *Ent. Syst.* iii. i. p. 281. n. 32 (1793)
(Morocco). (Pl. IV. fig. 17 ♂, 18 ♀).
22 ♂♂, 8 ♀♀, Nakheila, R. Atbara, January 31st—February 11th, 1904.
This species was generally to be found in company with the next, frequenting
the long coarse grass near the river.
13. †*Catachrysops eleusis* (Demaison), *Bull. Soc. Ent. Fr.* (6). viii. p. 66
(1888) (Egypt). (Pl. IV. fig. 15 ♂, 16 ♀).
27 ♂♂, 15 ♀♀, Nakheila, R. Atbara, January 31st—February 13th, 1904.
- 13A. *Zizera karsandra* (Moore), *P. Z. S.* p. 505. t. 31. f. 7 (1865) (Bengal).
1 ♂, Nakheila, R. Atbara, February 4th, 1904.
14. *Celerio lineata livornica* (Esper), *Eur. Schmett.* ii. p. 88 (1779) (Italy).
1 ♂, Wady Halfa, February 23rd, 1904.

15. *Odontocheilopteryx griseata* spec. nov.

♂. *Forewing*: grey, darker in the central area; basal line blackish, waved, edged on both sides with whitish; outer line at two-thirds, oblique outwards from costa to vein 6, then oblique inwards, crenulate, edged with whitish, which is most marked at costa and before inner margin and there itself followed by a dark line; submarginal line dentate, blackish, space between outer and submarginal line often brown-tinged, this colour sometimes extending to base; fringe mottled with dark grey, and pale along base; a blackish blotch at end of submarginal line on inner margin.

Hindwing: pale greyish ochreous; fringe grey, above anal angle blackish.

Underside: basal half of forewing dark grey, containing a slight pale spot at end of cell, which is faintly visible on upper side, and followed by a pale costal spot; outer half of wing pale grey; hindwing pale grey, with curved dark grey central line and dark spot at anal angle.

Head, thorax, and abdomen grey; antennae pale greyish ochreous,

♀ pale smoky grey, darker towards base and inner margin, with three wavy parallel dark grey lines beyond middle; underside of both wings pale grey.

Expanse of wings: ♂, 24 mm.; ♀, 35 mm.

Near to *O. sobria* (Wlk.) from Natal, and *obsoleta* (Klug) from Nubia and Upper Egypt.

8 ♂♂, 2 ♀♀, Nakheila, R. Atbara, February 4th—9th; 1 ♂, Merawi, N. Sudan, March 12th; 1 ♂, Shereik, N. Sudan, January 19th, 1904.

16. **Beralade pura** spec. nov. (Pl. IV. fig. 13 ♂).

Forewing: white; the costal edge finely ochraceous; fringe white, faintly glossy; a faint trace of a pale brown oblique line from the direction of apex to before middle of inner margin.

Hindwing: white.

Underside white; the veins and marginal line slightly ochraceous.

Head, thorax, and abdomen white; palpi dull yellow, externally fuscous; legs white, the fore-knees fuscous; all the tarsi yellow with black rings; antennae ochraceous.

Expanse of wings: 40 mm.

1 ♂, Shereik, N. Sudan, January 19th, 1904.

The single specimen came to light. An acetylene lamp with a "sheet," similar to that used in the Fens of Cambridgeshire, was employed.

17. **Cossus henleyi** spec. nov. (Pl. IV. fig. 14 ♂).

Forewing: dark grey, with a rufous tinge at middle of wing in the submedian interval; costal area with numerous short black streaks, some of which are produced across wing as dark lines; one before middle, a second just beyond it, the two approximated below the median; one at two-thirds to near anal angle, and a fourth before hindmargin, ending above anal angle and ramifying towards margin; fringe iron-grey.

Hindwing: much paler grey, towards apex whitish, with dark grey rippling between the veins; fringe grey.

Underside pale dull cinereous; costal streaks of forewing short and thick; lines only visible towards hindmargin; hindwing like forewing in tint, the costa thickly dusted with blackish.

Head, thorax, and abdomen grey; tips of shoulders and patagia, and basal segments of dorsum black; antennae black; legs dark and light grey.

Expanse of wings: 40 mm.

9 ♂♂, Nakheila, R. Atbara, February 7th, 8th, 1904.

All the specimens came to light, settling at once on the sheet. This species is named in honour of the Hon. Francis R. Henley.

18. **Ilema henleyi** spec. nov. (Pl. IV. fig. 31 ♀).

Forewing: cinereous, speckled with blackish; at about one-third is a broad curved fascia constricted in middle, where the pale basal area projects into it; the costal, inner, and hindmargins are also sprinkled with black scales, and possibly in quite fresh examples the whole area is thus sprinkled; at two-thirds there are traces of an oblique line marked by black dashes on veins; before the marginal